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**From:** Stein, Carol [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=A959861E95B94ABFB02122EAD11F98B5-STEIN, CAROL]  
**Sent:** 3/31/2015 6:53:35 PM  
**To:** Harrington, Jim (DEC) [jim.harrington@dec.ny.gov]  
**CC:** Mannino, Pietro [Mannino.Pietro@epa.gov]  
**Subject:** RE: question about radiation in water on Long Island

Thank you Jim.

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**From:** Harrington, Jim (DEC) [mailto:jim.harrington@dec.ny.gov]  
**Sent:** Tuesday, March 31, 2015 12:29 PM  
**To:** Stein, Carol  
**Cc:** Garbarini, Doug; Karpinski, Steven (HEALTH)  
**Subject:** FW: question about radiation in water on Long Island

Carol — Steve K passed the email string on. As discussed with the water districts at the meeting with EPA last week, (Doug and Pete were there) DEC continues to believe that the source of radium in groundwater is unrelated to the Grumman site but I made a commitment to ensure that some additional data is collected to support the original data (which showed levels below what is being seen at Bethpage) Jim H

James B Harrington, PE  
Director, Remedial Bureau A  
Division of Environmental Remediation  
518 -402-9624

Please note my new email address  
[Jim.Harrington@dec.ny.gov](mailto:Jim.Harrington@dec.ny.gov)

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**From:** Karpinski, Steven (HEALTH)  
**Sent:** Tuesday, March 31, 2015 10:55 AM  
**To:** Harrington, Jim (DEC)  
**Cc:** Bethoney, Charlotte (HEALTH); Swartwout, John (DEC); Scharf, Steven (DEC); Wilkie, Henry (DEC)  
**Subject:** FW: question about radiation in water on Long Island

Hi Jim,

Take a look at the email string below between Min-Sook (DOH Bureau of Water Supply Protection) Carol Stein regarding the radium in groundwater issue. Min-Sook did mention that Nassau County is working on compiling radium data from NC water districts, and I am wondering if we should let Carol know that you intend to see that additional monitoring wells are sampled for radiologicals?

Steven Karpinski  
Bureau of Environmental Exposure Investigation  
New York State Department of Health  
Empire State Plaza  
Corning Tower, Room 1787  
Albany, New York  
518-402-7860

Please note new email address: [steven.karpinski@health.ny.gov](mailto:steven.karpinski@health.ny.gov)

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**From:** Stein, Carol [<mailto:Stein.Carol@epa.gov>]

**Sent:** Tuesday, March 31, 2015 10:39 AM

**To:** Kim, Min-Sook (HEALTH)

**Cc:** Sokol, Roger (HEALTH); Lowy, Michael; Boepple-Swider, Teresa (HEALTH); Devine, Brian D (HEALTH); Karpinski, Steven (HEALTH); Scharf, Steven (DEC); Costello, Cynthia A (HEALTH); Montysko, Michael (HEALTH); Wilkie, Henry (DEC)

**Subject:** RE: question about radiation in water on Long Island

Thank you Min-Sook for the very thorough response. I will pass this information on to my management. Thank you also for providing the contact information. It is very helpful. (FYI, I coordinate fairly regularly with NYSDEC and with Steve Karpinski regarding the site contamination investigation.)

Carol A. Stein, P.E.  
Environmental Engineer  
Mega Projects Section, SPB  
USEPA  
290 Broadway  
New York, NY 10007-1866  
212-637-4181

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**From:** Kim, Min-Sook (HEALTH) [<mailto:min-sook.kim@health.ny.gov>]

**Sent:** Tuesday, March 31, 2015 10:27 AM

**To:** Stein, Carol

**Cc:** Sokol, Roger (HEALTH); Lowy, Michael; Boepple-Swider, Teresa (HEALTH); Devine, Brian D (HEALTH); Karpinski, Steven (HEALTH); Costello, Cynthia A (HEALTH); Montysko, Michael (HEALTH)

**Subject:** RE: question about radiation in water on Long Island

Thanks for clarification. Now I have a better picture. The treatment of drinking water can be potentially funded by the DWSRF if all conditions for funding are met. Our Design Section staff are knowledgeable on the subject. Michael Montysko ([michael.montysko@health.ny.gov](mailto:michael.montysko@health.ny.gov)) is the Design Section Chief.

I'm not aware of any initiatives to define the source of radium in the Bethpage well or any further sampling of monitoring wells for radium. I was minimally involved in the issue as the BWSP is not the leading agency for spill/SUPER fund site contamination investigation. I remember, however, that Grumman-Navy took several samples from their monitoring wells in 2013, and their combined radium results were between 2 and 3 pCi/L, about a half of what was found in Bethpage well 4-1. I didn't know if/what happened after that. I followed-up with staff at the Bureau of Environmental Exposure Investigation (BEEI), and they were not aware of any further monitoring well sampling activity either. If you need further assistance on the issue, contact Steven Karpinski ([steven.karpinski@health.ny.gov](mailto:steven.karpinski@health.ny.gov)) at BEEI. If you need an assistance on the potential source of radium found in Bethpage wells (natural vs. industrial contamination), Cynthia Costello ([cynthia.costello@health.ny.gov](mailto:cynthia.costello@health.ny.gov)) at the Bureau of Environmental Radiation Protection might be able to explain your questions. However, keep in mind that determination of the source would not be possible if Bethpage only have radionuclides data required under Radionuclides Rule, e.g., gross alpha (and beta), radium 226 and 228, and uranium.

Our regional office staff contacted Nassau County HD for your inquiries. If I receive any information from them, I'll let you know.

PS – I was informed that Nassau County HD is in the process of compiling radium results reported by their public water systems. I'm not sure if those public drinking water data would be helpful to you.

Min-Sook Kim, Ph.D., P.E.  
Bureau of Water Supply Protection  
New York State Department of Health  
E-Mail : [min-sook.kim@health.ny.gov](mailto:min-sook.kim@health.ny.gov)  
TEL: (518) 402-7650

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**From:** Stein, Carol [<mailto:Stein.Carol@epa.gov>]  
**Sent:** Wednesday, March 25, 2015 11:29 AM  
**To:** Kim, Min-Sook (HEALTH)  
**Cc:** Sokol, Roger (HEALTH); Lowy, Michael; Boepple-Swider, Teresa (HEALTH)  
**Subject:** RE: question about radiation in water on Long Island

Thank you for your response. At this point in time, we just want to let them know what options might be available.

By 'clean up', I'm referring to treating the water at the plant before it is distributed to the public. (BWD already treats its drinking water for other constituents, mainly VOCs, before distributing the water to the community.) Would a treatment system for radiation at the water distribution plant potentially be fundable under the DWSRF?

Thanks,  
-Carol-

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**From:** Kim, Min-Sook (HEALTH) [<mailto:min-sook.kim@health.ny.gov>]  
**Sent:** Wednesday, March 25, 2015 11:14 AM  
**To:** Stein, Carol  
**Cc:** Sokol, Roger (HEALTH); Lowy, Michael; Boepple-Swider, Teresa (HEALTH)  
**Subject:** RE: question about radiation in water on Long Island

Thank you for your explanation. I still need to know what exactly "clean up" water supply wells means. Does the BWD want to do well remediation or want to install a treatment system to remove radium. If the former, the Drinking Water State Revolving Fund (DWSRF) which is managed by our Bureau does not fund well remediation.

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**From:** Stein, Carol [<mailto:Stein.Carol@epa.gov>]  
**Sent:** Wednesday, March 25, 2015 10:04 AM  
**To:** Kim, Min-Sook (HEALTH)  
**Cc:** Sokol, Roger (HEALTH); Lowy, Michael  
**Subject:** RE: question about radiation in water on Long Island

Thank you Min-Sook. I am referring to the water supply wells that serve several water districts in Nassau County, including Bethpage Water District (BWD). The water districts have met several times over the past few months with the EPA and NYSDEC remedial programs due to their concern about the Navy/Northrop-Grumman plume. One of the issues that has come up at these meetings is that BWD has allegedly found Radium 226 and 228 in one of its water supply wells. Based on some internal discussions, it looks like this radiation probably is naturally occurring. I have been asked by my management to find out (1) if funding might be available to help BWD clean up radiation from these water supply wells, (2) if there are initiatives underway to define the source of this naturally occurring radiation in Nassau County and/or (2) if there might be initiatives to improve the quality of radiation data.

We were planning to find this out internally, and then to contact the water districts with this information. As this is the first I've heard of this, it would be interesting to hear if BWD had already contacted DOH about this.

Thank you,

Carol A. Stein, P.E.  
Environmental Engineer  
Mega Projects Section, SPB  
USEPA  
290 Broadway  
New York, NY 10007-1866  
212-637-4181

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**From:** Kim, Min-Sook (HEALTH) [<mailto:min-sook.kim@health.ny.gov>]  
**Sent:** Wednesday, March 25, 2015 9:35 AM  
**To:** Stein, Carol  
**Cc:** Sokol, Roger (HEALTH); Lowy, Michael  
**Subject:** FW: question about radiation in water on Long Island

Carol,

Your e-mail was forwarded to me as I handle most radionuclide issues in drinking water in NYS. In order to answer your question about potential funding sources, I need clarification on your term "their municipal well" used in your e-mail. Did you really mean Water District's (I guess Bethpage's) water supply wells? If so, does Bethpage truly want to remediate their wells, or just want to install water treatment systems to remove radium? Or did you actually mean cleaning up monitoring wells owned by Grumman-Navy?

Thanks.



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**From:** Stein, Carol [<mailto:Stein.Carol@epa.gov>]  
**Sent:** Tuesday, March 24, 2015 1:42 PM  
**To:** Boepple-Swider, Teresa (HEALTH); Lowy, Michael; Sokol, Roger (HEALTH)  
**Cc:** Gould, Stephen; Anderson, Arlene  
**Subject:** Re: question about radiation in water on Long Island

Thank you. I also was told that there might be funding available to water districts for cleaning up radiation in their municipal wells. Do you know who might be a contact person for this?

thanks,

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**From:** Boepple-Swider, Teresa (HEALTH) <[teresa.boepple-swider@health.ny.gov](mailto:teresa.boepple-swider@health.ny.gov)>

**Sent:** Tuesday, March 24, 2015 1:36 PM

**To:** Lowy, Michael; Sokol, Roger (HEALTH)

**Cc:** Gould, Stephen; Anderson, Arlene; Stein, Carol

**Subject:** RE: question about radiation in water on Long Island

Thanks Mike for the email.

We will look into this and get back to you shortly.

Teresa M. Boepple-Swider, P.E.  
Assistant Director  
Bureau of Water Supply Protection  
New York State Department of Health  
Corning Tower, Room 1168  
Empire State Plaza  
Albany, NY 12237  
Phone (518)402-7654/Fax (518)402-7599

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**From:** Lowy, Michael [<mailto:Lowy.Michael@epa.gov>]

**Sent:** Tuesday, March 24, 2015 9:03 AM

**To:** Sokol, Roger (HEALTH); Boepple-Swider, Teresa (HEALTH)

**Cc:** Gould, Stephen; Anderson, Arlene; Stein, Carol

**Subject:** RE: question about radiation in water on Long Island

DOH:

An inquiry from within R2 on what potential initiatives are occurring in (or by) Nassau County re: the rad sampling beyond the required monitoring for DW compliance. I recall there are concerns by PWSs in the path of potential contamination from various sources and Grumman/Navy, etc. and they have been seeking some kind of action on the part of the County to address, my guess is any initiative would involve Nassau County?

Thanks

Michael J. Lowy  
Environmental Scientist  
Drinking Water and Ground Water Protection Section  
Drinking Water Municipal Infrastructure Branch  
USEPA Region 2  
NY, NY 10007  
212.637.3830

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**From:** Stein, Carol  
**Sent:** Monday, March 23, 2015 4:47 PM  
**To:** Lowy, Michael  
**Cc:** Gould, Stephen; Anderson, Arlene  
**Subject:** FW: question about radiation in water on Long Island

Hi Michael - Please see my e-mail, below, to Steve Gould. I am doing a project in Doug Garbarini's Branch. We were wondering if the Region 2 drinking water folks knew about an initiative that various agencies are involved in, for the purpose of getting more reliable data regarding radiation in groundwater. Steve responded that although he hasn't dealt with this, he thought that you may have.

Thanks,

Carol A. Stein, P.E.  
Environmental Engineer  
USEPA Region 2  
290 Broadway  
New York, NY 10007-1866  
212-637-4181

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**From:** Stein, Carol  
**Sent:** Monday, March 23, 2015 3:33 PM  
**To:** Gould, Stephen  
**Subject:** question about radiation in water on Long Island

Hi Steve -- Please advise when you have the chance. Several water districts in eastern Nassau County have told us that there are low levels of radiation found in their wells. They believe that Grumman is responsible, but Grumman does not have records of having used these compounds. At a meeting that I attended with Grumman and the Navy last week, it was mentioned that there appears to be naturally occurring radiation in soils (and I would assume also groundwater), and that there are various agencies attempting to get reliable data on this. Is this an initiative that you are aware of, and if so, what sort of work is being done at this time to define the source of the radiation in Nassau County, and to mitigate if necessary?

Thanks,

Carol A. Stein, P.E.  
Environmental Engineer  
Mega Projects Section, SPB  
USEPA  
290 Broadway  
New York, NY 10007-1866  
212-637-4181